National Imaging Associates, Inc.*	
Clinical guidelines **TEMPOROMANDIBULAR JOINT (TMJ) MRI**	**Original Date: May 23, 2003**
CPT Code: 70336	**Last Revised Date: May 2~~June 2~~0221**
Guideline Number: NIA_CG_007	**Implementation Date: January 2023~~2~~**

INDICATIONS FOR TEMPOROMANDIBULAR JOINT (TMJ) MRI

For evaluation of temporomandibular joint dysfunction (TMD) with suspected internal joint derangement with ~~both~~[1-3]:
~~(Bag, 2014; Gauer, 2015; Petscavage-Thomas, 2014)~~

- Persistent symptoms of facial or jaw pain, restricted range of motion, pain and/or noise with TMJ function (i.e., chewing) **AND**
- Conservative therapy with a trial of anti-inflammatory AND behavioral modification* has been unsuccessful for at least four (4) weeks

*** Behavioral modification includes patient education, self-care, cognitive behavior therapy, physical therapy, and occlusal devices. Muscle relaxants can be used for spasm.**
Note: X-ray should be the initial study if there is recent trauma, dislocation, malocclusion, or dental infection
~~* Behavioral modification includes patient education, self-care, cognitive behavior therapy, physical therapy, and occlusal devices. Muscle relaxants can be used for spasm.~~

For evaluation of j~~J~~uvenile idiopathic arthritis (JIA)[3, 4]
~~(Granquist, 2018, Petscavage-Thomas, 2014)~~

Abnormal initial x-ray or ultrasound needing additional imaging[1]
~~(Bag, 2014)~~

Pre-operative evaluation in candidates for orthognathic surgery

Post-operative evaluation[5]
~~(Hoffman, 2015)~~

- A follow-up study may be needed to help evaluate a patient's progress after treatment, procedure, intervention, or surgery. Documentation requires a medical reason that clearly indicates why additional imaging is needed for the type and area(s) requested.

* National Imaging Associates, Inc. (NIA) is a subsidiary of Magellan Healthcare, Inc.

BACKGROUND

Temporomandibular joint (TMJ) dysfunction causes pain and dysfunction in the jaw joint and muscles controlling jaw movement. Symptoms may include jaw pain, masticator muscle stiffness, limited movement or locking of the jaw, clicking or popping in jaw joint when opening or closing the mouth, and a change in how the upper and lower teeth fit together. The cause of the condition is not always clear but may include acute or chronic trauma to the jaw or temporomandibular joint, e.g., grinding of teeth, clenching of jaw, or impact in an accident. Osteoarthritis or rheumatoid arthritis may also contribute to the condition.

Etiologies of TMJ dysfunction (TMD) include intra-articular (intracapsular) and extra-articular (extracapsular pathology). Intra-articular (intracapsular pathology), such as disc displacement and coexisting osteoarthritis or degenerative joint disease, is considered the most common cause of serious TMJ pain and dysfunction and the most likely to be treated surgically. Extra-articular (extracapsular pathology) includes musculoskeletal (bone, masticatory muscles and tendons) and central nervous system/peripheral nervous system ~~(ASTMJS, 2001)~~.[6]

Imaging can assist in the diagnosis of TMD when history and physical examination findings are equivocal. The initial study should be plain radiography (transcranial and transmaxillary views) or panoramic radiography when there is recent trauma, dislocation, malocclusion, or dental infection ~~(Gauer, 2015)~~.[2] Ultrasound is an inexpensive and easily performed imaging modality that can also be used to evaluate the TMJ ~~(Tu, 2018)~~.[7] CT is useful to evaluate the bony structures of the TMJ when there is suspicion of bony involvement (i.e., fractures, erosions, infection, invasion by tumor, as well as congenital anomalies) ~~(Bag, 2014)~~.[1] Magnetic resonance imaging (MRI) has the highest sensitivity, specificity, and accuracy in the evaluation of temporomandibular joint dysfunction and provides tissue contrast for visualizing the soft tissue and periarticular structures of the TMJ.

Conservative care for TMD includes patient education, self-care, behavioral modification, cognitive behavioral therapy/biofeedback, medication, physical therapy, and occlusive devices. Medications include NSAIDS and muscle relaxants and in chronic cases, benzodiazepines, or antidepressants. There is lack of high-quality evidence and uncertainty about the effectiveness of manual therapy and therapeutic physical therapy in treating TMJ dysfunction ~~(Armijo-Olivo, 2016)~~.[8] The use of occlusive splints is thought to alleviate some of the degenerative forces on the TMJ which may be helpful in patients with bruxism or nocturnal teeth clenching. ~~The~~ ~~p~~**P**referred devices are unclear from the literature and dental consultation is required ~~(Gauer, 2015)~~.[2] In systematic reviews, there has been short-term benefit observed from splinting but no clear role in the overall long-term treatment of TMD patients ~~(Ebrahim, 2012; Pficer, 2017)~~.[9, 10]

POLICY HISTORY

Date	Summary
MJune ay 2022	Updated background and references
June 2021	Deleted: Initial x-rays have been performed Added: **Note**: X-ray should be the initial study if there is recent trauma, dislocation, malocclusion, or dental infection * Behavioral modification includes patient education, self-care, cognitive behavior therapy, physical therapy, and occlusal devices. Muscle relaxants can be used for spasm.
May 2020	Added: • For evaluation of temporomandibular joint dysfunction (TMD) with suspected internal joint derangement with ALL of the following ○ Persistent symptoms of facial or jaw pain, restricted range of motion, pain and/or noise with TMJ function (i.e., chewing) ○ Conservative therapy with a trial of anti-inflammatory AND behavioral modification has been unsuccessful for at least four (4) weeks ○ Initial X-rays have been performed • For evaluation of Juvenile idiopathic arthritis (JIA) • Abnormal initial x-ray or ultrasound needing additional imaging Deleted: • Locked or Frozen Jaw ○ For evaluation of dysfunctional temporomandibular joint after unsuccessful conservative therapy for at least four (4) weeks with bite block or splint and anti-inflammatory medicine
May 2019	Updated background information and references

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Bag AK, Gaddikeri S, Singhal A, et al. Imaging of the temporomandibular joint: An update. *World J Radiol*. 2014; 6(8):567-582. http://doi.org/10.4329/wjr.v6.i8.567.

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~~Tu KH, Chuang HJ, Lai LA, et al. Ultrasound Imaging for Temporomandibular Joint Disc Anterior Displacement. *J Med Ultrasound*. 2018;26(2):109–110. doi:10.4103/JMU.JMU_18_18.~~

~~Reviewed / Approved by NIA Clinical Guideline Committee~~

~~**GENERAL INFORMATION**~~

~~It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.~~

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ADDITIONAL RESOURCES

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